



**US Army Corps
of Engineers**
Rock Island District

United States Department of Defense

US Army Corps of Engineers - Rock Island District

UMR-IWW Navigation Study 1994 Public Meetings

Interim Product Report, November 1995

"Response to Issues Raised at the Public and NEPA Scoping Meetings of November 1994"

Figure 2 - Potential Small-Scale Measures

FIGURE 2

Potential Small-Scale Measures

1. **SCHEDULING OF LOCK OPERATIONS**
 - 1a. N-Up/N-Down
 - 1b. Ready to Serve Policy
 - 1c. Self Help Policy
 - 1d. Scheduling Program
2. **ASSISTANCE TO LOCKAGES**
 - 2a. Helper Boats
 - 2b. Switchboats
 - 2c. Endless Cable System
 - 2d. Unpowered Traveling Kevel
 - 2e. Powered Traveling Kevel
 - 2f. Hydraulic Assistance
3. **IMPROVEMENTS TO APPROACH CHANNELS**
 - 3a. Approach Channel Widening/Realignment
 - 3b. Adjacent Mooring Facilities
 - 3c. Funnel-Shaped Guidewalls
 - 3d. Wind Deflectors
 - 3e. Extend Guidewalls
 - 3f. Add Guide Cells
 - 3g. Reconfigure Bullnose
 - 3h. Radar Reflectors
 - 3i. Electronic Guidance System
4. **AREA-WIDE CHANNEL IMPROVEMENTS**
 - 4a. Remove/Adjust Bends, One-way Reaches, Bridges
 - 4b. Improve Navigation Aids and Channel Markings
 - 4c. Innovative Dredging Strategies
 - 4d. Water Flow Management Policies
 - 4e. Increase Channel Width
 - 4f. Isolate Recreational Facilities & Marinas Away from Channel
 - 4g. Improve Bridge Operations and Maintenance
 - 4h. Dual Channel at Restrictive Bridges
5. **TOW CONFIGURATION AND OPERATIONS**

- 5a. Mandate Use of Bow Thrusters
- 5b. Mandate Use of Prototype Bow Thrusters
- 5c. Tow Size Standardization
- 5d. Cooperative Equipment sharing/Scheduling
- 5e. Institute Waterway Traffic Management
- 5f. Increase Number and Size of Fleeting Areas
- 5g. Fuel Monitoring & Management
- 5h. Use of Heavy Fuels
- 5i. New Barge and Boat Bottom Treatments
- 5j. Improved Barge and Boat Hull Designs
- 5k. Barge Stacking for Backhauls
- 5l. Container Movement
- 5m. New Backhaul Opportunities
- 5n. Universal Couplers/Hand Winches
- 5o. Increase Speed Limits in Restricted Reaches
- 5p. Reduce Liability of Tow Operators for Damage
- 5q. Require Minimum Crew Size and Training
- 5r. Mandate Minimum Horsepower

- 6. **LOCK OPERATING EQUIPMENT/PROCEDURES**
 - 6a. Modify Intake Structures
 - 6b. Modify Discharge Structures
 - 6c. Modify Wall Ports
 - 6d. Install Self-Cleaning Trash Racks
 - 6e. Centralize Controls
 - 6f. Portable Controls
 - 6g. Automate Controls
 - 6h. Install Floating Mooring Bits
 - 6i. Upgrade Valve Operating Equipment
 - 6j. Upgrade Gate Operating Equipment
 - 6k. Install Gate Wickets in Miter Gates
 - 6l. Provide Explicit Operating Guides
 - 6m. Fenders, energy Absorbers
 - 6n. Require Vessels to Stay Clear of Emptying/Filling System
 - 6o. Operate Dam Gates Based on Lockage
 - 6p. Lift Gates at Lock

- 7. **ICE CONDITIONS**
 - 7a. Mechanical Ice Cutting Device
 - 7b. Skin Plates
 - 7c. Air Bubbler System
 - 7d. Heat Plates
 - 7e. Heated Water Jet
 - 7f. Clear Ice from Barges
 - 7g. Ice Chutes

- 8. **RECREATIONAL VESSELS**
 - 8a. Recreational Vessel Bypass Lifts
 - 8b. Scheduling of Recreational Vessel Usage
 - 8c. License Recreational Craft Operators
 - 8d. Recreational Craft Landing Above and Below lock

- 9. **COST ALLOCATION**
 - 9a. Apply Congestion Tolls
 - 9b. Allocation of Operations and Maintenance Costs
 - 9c. Low Head Hydroelectric Units
 - 9d. Privatization of Lock Operations
 - 9e. Excess Lockage Time Charges
 - 9f. Lockage Time Charges

- 10. **OTHER**
 - 10a. Increase Lock Staffing
 - 10b. Automate Dam Controls
 - 10c. Radar at Lock
 - 10d. Real-Time Channel Depth and Weather Monitoring
 - 10e. Improved Lighting
 - 10f. Publish Lockage Times by User
 - 10g. Create Indraft
 - 10h. Operational Philosophy/Industry Attitude
 - 10i. Deepen River Upstream of Gates
 - 10j. Pilot Communication (Bulletin Board)
 - 10k. Closed Circuit Television (CCTV) at Lock
 - 10l. Wicket Gates in Dam
 - 10m. Automated Lockage System from Queue Point
 - 10n. Specified Navigation Season

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